

Appl. No. 10/707,989
Response dated April 11, 2005
Reply to Office Action of Jan. 11, 2005

REMARKS

In the January 11, 2005 Office Action, claims 1-24 were allowed, claims 25-37, 39 and 46-50 were rejected, and claims 38 and 40-45 were objected to. In addition, the specification was objected to because of a number of informalities.

Status of Claims and Amendments

In response to the January 11, 2005 Office Action, the applicant has cancelled claims 25 and 37, amended claims 26, 38-40 and 46, and added new claim 51 as indicated above. Applicants wish to thank the Examiner for the indication of allowable subject matter and the thorough examination of this application. Thus, claims 1-24, 26-36, and 38-51 are pending, with claims 1, 19, 46, 26 and 38 being the only independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

Objections to the Specification

The Abstract was objected to due to the use of legal phraseology such as "means". In response, the applicant has amended the Abstract to remove all occurrences of the word "means" and replaced them with the word "unit". In addition, the Applicant has made minor editorial changes to the Abstract in order to comply with the 50-150 word count limitation.

The lack of descriptions in Paragraph 0237 for the terms " ΩnT " and " λ_{308} " in Equation 30 was objected to. In response, the applicant has replaced the term " λ_{308} " with the term " λ ". With regard to the apparent lack of description of the term " ΩnT ", the applicant respectfully points out that this term should properly be understood as " $\ln T$ " (i.e., the natural logarithm of T), and in order to clarify this, has amended paragraph 0240 accordingly.

The use of the term " λ_{r15} " in paragraph 0331 in order to define a portion of Equation 34 was objected to. In response, the applicant has replaced the term " λ_{r15} " with " ϵ_{r15} ", and has amended the term "dielectric constant" to make it clear that this refers to the "relative dielectric constant".

The term " λ_{825} " used in Equation 36 was referred to as " λ_{308} " in Paragraph 0372 and was thus objected to. In response, the applicant has amended Equation 36 in Paragraph 0371 to replace the term " λ_{825} " with " λ_{308} ". In addition, Paragraphs 0372 and 0511 were amended in order to clarify that the numerator in the respective Equations should properly be understood as " $\ln T$ " (i.e., the natural logarithm of T).

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The term " L_Y " that appears in Equation 54 in Paragraph 0491 was objected to because no definition of this term was provided. In response, the applicant has amended Paragraph 0489 to include the definition of the term " L_Y ". The material added to Paragraph 0491 appears to have been inadvertently omitted from the present application due to a translation error, but is disclosed in at least one of the Japanese patent applications that the present application claims foreign priority from (e.g., 2003-022073). The applicant respectfully submits that this added material does not constitute new matter, as it has been incorporated by reference to the foreign priority applications.

Paragraph 0519 was objected to on the ground that "incorporation of essential material in the specification by reference to a foreign application or patent" is improper. In response, the applicant respectfully directs the Examiner's attention to MPEP Section 201.13(a), subparagraph G titled "Incorporation by Reference", which states in part that the applicant "may incorporate by reference the foreign priority application by including a statement in the U.S. application-as-filed that such specifically enumerated foreign priority application is 'hereby incorporated by reference'. This section also states that the "inclusion of the incorporation by reference of the foreign priority application will permit an applicant to amend the U.S. application to include any subject in the foreign priority application without raising the issue of new matter". Thus, the applicant respectfully submits that the inclusion of this paragraph is appropriate.

The applicant has also amended Paragraph 0519 to correct minor typographical errors in the application numbers of the foreign priority documents. Please note that the application numbers of the foreign priority documents are correctly recited in other portions of the originally filed application (such as in the declaration and the application data sheet).

Withdrawal of the aforementioned objections is respectfully requested.

Claim Rejections - 35 U.S.C. §112

Claims 46-50 were rejected under 35 U.S.C. §112, first paragraph, because the term " λ_{825} " used in the equation recited in Claim 46 is not defined. In response, the applicant has amended the term " λ_{825} " to " λ ".

Claims 25-36 and 46-50 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. More specifically, the term "the dielectric of the microwave generating means" in Claim 25 is alleged to lack antecedent basis, and Claim 46 is alleged to be vague because the terms " ΩnT " and " λ_{308} " are not defined. In response, the applicant has cancelled

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claim 25, and has amended claim 46 to clarify the term " ΩnT " as noted above and to replace the term " λ_{308} " with " λ ".

Accordingly, the applicant believes that the rejections under 35 U.S.C. §112, first and second paragraphs have been overcome. Withdrawal of the rejections is respectfully requested.

Claim Rejections - 35 U.S.C. § 102

Claim 25 stands rejected under 35 U.S.C. §102(b) as being anticipated by Koshimizu (US 6,101,970), and claims 37 and 39 stand rejected under 35 U.S.C. §102(b) as being anticipated by Samukawa (US 6,043,608). However, claims 26-36 were indicated to be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and rewritten in independent form to include all of the limitations of the base claim and any intervening claims. In addition, claims 38 and 40-45 were indicated to be allowable if rewritten in independent form, and to include all of the limitations of the base claim and any intervening claims. Applicant again thanks the Examiner for this indication of allowable subject matter and the thorough examination of this application.

In response to the rejection of claim 25, the applicant has cancelled claim 25, has rewritten claim 26 in independent form to include most (but not all) of the elements of base claim 25, and has made appropriate amendments thereto to overcome the rejection under 35 U.S.C. 112, second paragraph. Note that the applicant has not included in claim 26 the portion of claim 25 which recited that the "antinodes or nodes of the microwaves in the dielectric are positioned at each position of the axes". The applicant has instead chosen to place this recitation into new claim 51. Nonetheless, the applicant respectfully submits that amended claim 26 is still patentably distinct from the disclosure of the Koshimizu reference, and thus is allowable.

In response to the rejection of claims 37 and 39, the applicant has cancelled claim 37, and has rewritten claim 38 in independent form to include the elements of base claim 37. The applicant respectfully submits that claim 39 is now allowable because it now depends from amended (and allowable) base claim 38.

Prior Art Citation

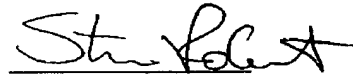
In the Office Action, additional prior art references were made of record. The applicant believes that these references do not render the claimed invention obvious.

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In view of the foregoing amendment and comments, the applicant respectfully asserts that the pending claims are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested. The Commissioner is hereby authorized to charge any fees associated with this communication (including extension of time fees) or credit any overpayment to Deposit Account No. 19-2042.

Respectfully submitted,



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